

Application No. 09/981,987
Reply to Office Action of November 26, 2003

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-5 and 7-31 are presently active in this application, Claims 1, 2 and 8 having been amended, Claim 6 canceled and Claims 22-31 added by the present Amendment; and Claims 5, 7, 9-13, and 15-8 having been withdrawn from consideration as directed to a non-elected invention.

In the outstanding Official Action Claims 1-4, 6, 8, 14, 19 and 20 were rejected under 35 USC §102(b) as being anticipated by Kamiguchi et al (USPN 6,111,729), and Claim 21 was rejected under 35 USC §103(a) as being unpatentable over Kamiguchi et al in view of Dieny et al (USPN 6,462,641).

In light of the outstanding grounds for rejection, Claims 1, 2 and 8 have been amended to clarify what are believed to be more clearly patentably distinguishing features of Applicants' invention. Amended Claims 1-2 include subject matter derived from canceled Claim 6 and the specification at page 30, line 37 to page 31, line 13. New Claims 22-25 are supported in the specification at page 35, lines 14-33, page 8, line 34 to page 36, line 2, page 8, lines 21-22. New Claims 26-31 are supported in the specification at page 48, line 25 to page 51, line 6. No new matter has been added.

As stated in amended Claim 1 and 2, the non-magnetic intermediate layer of the recited magnetoresistance effect film includes a non-magnetic metallic layer and a resistance regulating layer stacked on the non-magnetic metallic layer, and the resistance regulating

layer is formed on the non-magnetic intermediate layer or on the interface between the non-magnetic intermediate layer and at least one of the magnetization fixed layer and the magnetization free layer.

In contrast to the claimed structure, Kamiguchi et al teach an atomic-diffusion barrier layer 5 is formed in the interface between the first magnetic layer 1 and the metallic buffer layer (see FIG. 1) or in the interface between the ferromagnetic layer 11 and the magnetic undercoat layer 12 (see FIG. 2). However, Kamiguchi et al does not disclose or suggest that the atomic-diffusion barrier layer 5 is formed in the non-magnetic intermediate layer 3 or on the interface between the non-magnetic intermediate layer 3 and at least one of the magnetization fixed layer 2 and the magnetization free layer 1. Accordingly, it is respectfully submitted that Claims 1-2 patentably distinguish over Kamiguchi et al, as well as the remaining claims dependent therefrom.

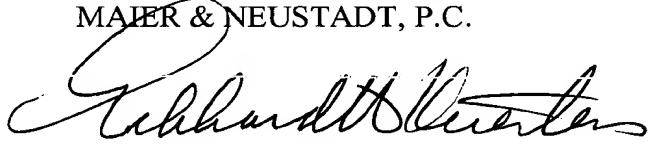
The Dieny et al. patent, cited in the rejection of Claim 21, does not disclose or suggest the resistance regulating layer is formed in the non-magnetic intermediate layer or on the interface between the non-magnetic intermediate layer and at least one of the magnetization fixed layer and the magnetization free layer. Therefore, it is respectfully submitted that the Dieny et al. patent does not cure the deficiencies in the Kamiguchi et al. patent, and that the pending claims patentably define over these references whether considered alone or in combination.

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Consequently, in view of the present amendment and in light of the above comments, it is respectfully submitted that the present application is in condition for formal allowance, and an early and favorable action to that effect if respectfully requested.

Respectfully submitted,

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